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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|--------------------------|------------------|
| 10/645,910 | 08/22/2003 | Tomoya Imazu | 023971-0300 | 8555 |
| 22428 | 7590 | 01/04/2006 | EXAMINER | |
| FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007 | | | LOUIS JACQUES, JACQUES H | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3661 | |

DATE MAILED: 01/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/645,910 | IMAZU, TOMOYA | |
| | Examiner | Art Unit | |
| | Jacques H. Louis-Jacques | 3661 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 17 October 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,6-9,19 and 20 is/are rejected.
- 7) Claim(s) 2-5 and 10-18 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/17/05, 10/19/05.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 6-9 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamauchi et al [6,887,175] in view of Fujikawa [6,840,341].

Yamauchi et al discloses a hybrid transmission for a hybrid vehicle comprising a two-degree-of-freedom differential mechanism. According to Yamauchi et al, the hybrid vehicle comprises a main power source (e.g., engine 3), a plurality of auxiliary (two) power sources (e.g., motors MG1 and MG2), and a planetary gear mechanism (e.g., planetary gearset 2) to modify a gear ratio when an output of the main power source is transmitted to a drive output member. See, for example, figures 1A, 2, 4A. Yamauchi et al discloses that the main power source is an engine (3), the plurality of auxiliary power sources are two motors (MG1, MG2), and the planetary gear mechanism is set to modify the gear ratio when the output of the main power source is transmitted to the drive output member is a four-element, two-degrees-of-freedom planetary gear mechanism expressed in a lever diagram in which the engine and the drive output member are interposed between the two motors. See column 8. In addition, according to Yamauchi et al, the

main power source is an engine (3), the plurality of auxiliary power sources are a coaxial multi-layer motor having one stator and two rotors, and the planetary gear mechanism is set to modify the gear ratio when the output of the main power source of the engine is transmitted to the drive output member is a Ravigneaux compound planetary gear train expressed in the lever diagram in which the engine and drive output member are interposed between the two motors constituting the coaxial multi-layer motor. See columns 3 and 4. Still, according to Yamauchi et al, power sources whose torque controls are enabled to be provide greater power are selected to control the hybrid transmission (vehicle) in order to improve the power transmission efficiency of the hybrid (vehicle) transmission. However, Yamauchi et al does not particularly teach suppressing vibration of the hybrid vehicle based on the selected power sources. Fujikawa, on the other hand, discloses a parallel hybrid vehicle having a controlling section for controlling or suppressing the vibration of the hybrid vehicle based on engine and motor torques. According to Fujikawa, the hybrid vehicle comprises an engine (8), a motor/generator (2) and a vibration suppression control section for superposes a vibration control signal onto each of torque commands supplied to the selected two power sources to suppress two-degrees-of-freedom vibrations of the planetary gear mechanism (3). See figure 1, columns 1- 2 and 13. Thus, it would have been obvious to one skilled in the art to use the vibration control of Fujikawa to control the hybrid vehicle of Yamauchi et al because such modification would provide a system that would compensate for torsional vibration of the vehicle due to changes in engine and motor torques, thereby preventing stalling of

the engine while improving the power transmission efficiency of the hybrid (vehicle) transmission.

Allowable Subject Matter

3. Claims 2-5 10-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendments & Arguments

4. The amendments along with the arguments filed therewith on October 17, 2005 have been entered and carefully considered by the examiner.

In particular, Applicant has amended claims 4 and 5 to depend on claim 2. Therefore, the rejection under 35 USC 112, 2nd paragraph has been withdrawn.

The IDS filed on October 19, 2005 has been considered by the examiner. It is noted that application serial number 10/445,846 listed in the IDS has been published as US Patent application publication US 20030224892.

Also, US patent application No. 10/445,907 listed in the IDS filed on October 17, 2005 has been issued as US Patent No. 6,887,175.

The claims were rejected over the combination of Yamauchi et al (6887175) and Fujikawa (6840341). Rejection the rejection, Applicant admitted that Fujikawa discloses a parallel hybrid vehicle in which vibration is suppressed but argued that “Fujikawa does not disclose or suggest ‘a vibration suppression control section that select two power

sources whose control torques are enabled to be performed and superposes a vibration suppression control signal onto each of torque commands supplied to the selected two power sources to suppress two-degrees-of-freedom vibrations of the planetary gear mechanism”. Applicant added, “Fujikawa does not disclose or suggest a vibration suppression signal that is output to the engine.” The examiner respectfully disagrees.

Yamauchi ‘175 discloses a hybrid transmission for a hybrid vehicle is comprised of a two-degree-of-freedom differential mechanism and a brake. Fujikawa discloses a controlling section comprising an engine torque calculating section for calculating an engine torque and a torsional vibration suppression torque calculating section for calculating a torsional vibration suppression torque to suppress a torsional vibration developed on the drive shaft according to the engine torque calculated by the engine torque calculating section, the torsional vibration suppression torque calculated by the torsional vibration suppression torque calculating section being outputted from the motor/generator. Fujikawa discloses a vibration suppression signal outputted to the engine.

Applicant asserted, “in contrast to the advantages of the Applicants’ invention, the combination of Yamauchi et al and Fujikawa will not control rotational vibration in the planetary gear mechanism in addition to vibration of the output shaft.” The examiner respectfully disagrees.

The combination of Yamauchi et al and Fujikawa, as set forth in the above rejection, provides a vibration control in the planetary gear mechanism. It should also be noted that the fact that applicant has recognized another advantage which would flow naturally from

following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Furthermore, it noted that Applicant is doing a piecemeal analysis of the references in that Applicant has provided arguments against the references individually. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In light of the above, claims 1, 6-9 and 19-20 remain rejected and claims 2-5 10-18 are objected to. Accordingly, this office action is made final.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques H. Louis-Jacques whose telephone number is 571-272-6962. The examiner can normally be reached on M-Th 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jacques H Louis-Jacques
Primary Examiner
Art Unit 3661

/jlj

Jacques H. Louis-Jacques
JACQUES H. LOUIS-JACQUES
PRIMARY EXAMINER